

CLAIMS

1. A process for preparing pregelatinized, cold water swelling starch, comprising: providing a highly cross linked, stabilized starch; and heating said starch under conditions of time, temperature and moisture effective to disrupt less than 50% of intact starch granules comprised in said starch and to provide the characteristic that when a slurry of said starch is subjected to high shear the viscosity will increase toward a maximum and retain that viscosity throughout further low shear mixing and holding periods.
2. A process according to Claim 1 wherein said starch is a cross-linked by treatment with phosphorous oxychloride or sodium trimetaphosphate.
3. A process according to Claim 1 or 2 wherein said starch is a stabilized starch, such as an hydroxypropylated, acetylated, phosphorylated, dextrinized starch or a starch substituted with octenylsuccinate groups.
4. A process according to Claim 1, 2 or 3 wherein at least a majority of the starch granules are whole and unbroken.
5. A process according to Claim 1, 2, 3 or 4 wherein said starch is a potato starch.
6. A process according to Claim 1, 2, 3 or 4 wherein said starch is a tapioca starch.
7. A process according to Claim 1, 2, 3 or 4 wherein said starch is derived from any one or combination of the following: potato starch, tapioca starch, arrowroot starch, yam starch, sweet potato starch.
8. A process according to Claim 1, 2, 3 or 4 wherein said starch is a non-cereal starch.

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9. A pregelatinized starch product of non-cereal origin which exhibits notable shear thickening properties following medium to high shear mixing thereby enhancing their viscometric properties.
10. A pregelatinized starch product, which exhibits shear-thickening properties, comprising: a highly crosslinked, stabilized and cold water swelling starch having a majority of its starch granules intact and being characterized in that when a slurry of said starch is subjected to high shear the viscosity will increase toward a maximum and retain that viscosity through out further low shear mixing and holding periods.
11. A pregelatinized starch product according to claim 10 which exhibits an increase in viscosity to a maximum following high shear mixing of an aqueous slurry wherein the final viscosity following mixing and holding to form a product is no less than 25% of the maximum viscosity.
12. A pregelatinized starch product according to claim 10 which is characterized in that an aqueous slurry does not significantly increase viscosity under low shear conditions, the increase being less than 50% of the maximum achievable under high shear conditions.
13. A pregelatinized starch product according to claim 10 which is characterized in an aqueous slurry exhibiting not less than 50% of the viscosity values of the preferred starch illustrated in Figure 1 following high shear mixing.
14. A pregelatinized starch product according to claim 10 which is characterized in an aqueous slurry exhibiting a viscosity after high shear at least 2 times as high as that exhibited after low shear and should not decrease in viscosity from a maximum by more than about 25%.
15. A pregelatinized starch product according to claim 10 which is characterized in an aqueous slurry exhibiting a viscosity after high shear at least 6 times as high as

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that exhibited after low shear and should not decrease in viscosity from a maximum by more than about 25%.

16. A foodstuff containing a pregelatinized starch as in Claim 9 wherein the foodstuff has a pH of 2.5 to 8.0.
17. A cosmetic or personal care product containing a pregelatinized starch as in Claim 10, 11, 12, 13, 14 or 15 wherein the cosmetic or personal care product has a pH of greater than 8.0.
18. A pregelatinized starch as in Claim 10, 11, 12, 13, 14 or 15 wherein said starch hydrates at a sufficiently slow rate as to be easily dispersible.
19. A pregelatinized starch as in Claim 10, 11, 12, 13, 14 or 15 wherein said starch is a potato starch or arrowroot starch with granular size greater than 25 microns.
20. A pregelatinized starch as in Claim 10, 11, 12, 13, 14 or 15 that can be used in place of other hydrocolloids such as xanthan gum for reasons of suspension, viscosity, clarity.
21. A pregelatinized starch as in Claim 10, 11, 12, 13, 14 or 15 that allows for reduction in use level over cereal starches in foodstuffs such as pourable salad dressing of 5-30%.
22. A pregelatinized starch for use in foodstuff, cosmetic or personal care products for use according to any one of Claims 10, 11, 12, 13, 14 or 15.
23. A foodstuff obtainable using a pregelatinized starch such as those in any one of Claims 10, 11, 12, 13, 14 or 15.
24. A cosmetic or personal care product using a pregelatinized starch such as those in any one of the Claims 10, 11, 12, 13, 14 or 15.

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25. Pregelatinized starch products of non-cereal origin and compositions which exhibit notable shear thickening properties following processing stress thereby enhancing their viscometric properties and utilities in foodstuff, cosmetics and personal care products.

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